**Disease Note**

**Occurrence of Powdery Mildew Caused by Podosphaera Clandestina on Black Cherry in Mexico**

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During February-April 2013, symptoms of powdery mildew were observed in trees of black cherry (Prunus serotina subsp. capulli) in Tlaxcala (Mexico). Symptoms appeared as irregular necrotic lesions on both sides of the leaves. Fungal growth was present only on the abaxial surface. In severe infections, distortion of the leaves was observed. The preliminary identification of the fungus was performed by examination of morphological characters. Hyphae were septate, hyaline, thin-walled, and smooth. Conidiophores were 109-158 μm long, straight, erect, arising non-centrally from superficial hyphae. Foot-cells were cylindrical, slender, 55-73×8-10 μm, followed by 1 or 2 shorter cells. Conidia were ellipsoidal-ovoid to doliiform, 24-33×13-19 μm. Germ tubes were more or less terminal to lateral, simple, short to moderately long. Chasmothecia were not found. The morphological characters were consistent with those of the anamorphic state of Podosphaera clandestina, but also with the imperfect state of *P. pannosa* (Braun and Cook, 2012). To confirm the identification, the complete internal transcribed spacer (ITS) region of rDNA was amplified using primers ITS4 and ITS5 (White et al., 1990), and sequenced directly. The resulting sequence of 565 bp was deposited in GenBank under the accession No. KJ158161. Comparison with sequences from GenBank revealed that our sequence was 100% identical with the sequence of *P. pannosa* (accession No. AF011317). Based on the morphology and ITS rDNA sequence analysis, the fungus was identified as *P. clandestina* causing powdery mildew on black cherry in Mexico.


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Received March 1, 2014
Accepted March 4, 2014

**Disease Note**

**First Report of Mixed Infection of Papaya Ringspot Virus and Phytoplasma in Papaya in India**

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Papaya plants exhibiting symptoms such as multiple axillary shoots, leaf reduction, mosaic, chlorosis, flattened petiole, oily spots on stem and virescence of flowers were observed in Pune (India). Electron microscopy observations of leaf dip preparations revealed flexuous filamentous particle of 760×12 nm, suggesting the presence of a potyvirus, which was identified as *Papaya ringspot virus* (PRSV) in ELISA using a specific antiserum. The presence of PRSV was confirmed by RT-PCR using coat protein gene-specific primers that amplified a fragment of ca. 950 bp in size. Sequence analysis of the RT-PCR product (GenBank accession No. KJ421412) showed 87 to 100% identity at the nucleotide level with other Indian PRSV isolates (Jain et al., 2004). The presence of a phytoplasma was tested in symptomatic papaya by PCR using universal P1/P7 and Ri6mF2/Ri6mR1 primer pairs. BLAST analysis of the consensus sequence obtained by sequencing PCR products (GenBank accession No. JQ346525) revealed 99% nucleotide sequence identity with *Candidatus Phyllosma auranitofilia*, a member of group 16Sr II phytoplasma. Transmission of the phytoplasma to healthy papaya grafted onto infected papaya was obtained four weeks after grafting with the development of multiple axillary shoots. The presence of a phytoplasma and a virus in papaya has previously been reported in Puerto Rico and Cuba (Licha, 2002; Arocha et al., 2009). To our knowledge, this is the first evidence of mixed infection of PRSV and a phytoplasma in papaya from India, although these two pathogens were reported separately earlier (Jain et al., 2004; Rao et al., 2011).


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Received March 10, 2014
Accepted March 15, 2014